

ABSTRACT OF THE DISCLOSURE

[0074] In embodiments of the present invention, the electric field of a focused laser beam induces a dipole in a single-walled carbon nanotube. The single-walled carbon nanotube has one or more resonant frequencies. When the frequency of the laser beam is less than a resonance frequency of the single-walled carbon nanotube, the single-walled carbon nanotube may be trapped and the laser beam may move the single-walled carbon nanotube from a first microfluidic laminar flow to a second microfluidic laminar flow. When the frequency of the laser beam is higher than a resonant frequency of the single-walled carbon nanotube , the single-walled carbon nanotube may be repelled and the laser beam may not move the single-walled carbon nanotube.